

# ROADMAP TO RESILIENCE

PART OF THE CARE PROJECT



## EXECUTIVE SUMMARY

CARE stands for Climate Adaptation and Resilience Enhancement. CBE began this project in 2013 and, since then, we have worked to engage our members around climate change and the potential impacts in the environmental justice communities of Richmond and Wilmington, CA. As we experience greater impacts from climate change, the need to adapt to these changes becomes greater. These communities are similar in that they are on the frontlines of impacts from climate change and pollution. CBE recognizes that our work in creating policies to reduce greenhouse gases and lessen our reliance on fossil fuel continues to be crucial; we also realize it is inevitable that climate change will significantly impact our lives. These impacts are far more severe for low-income communities of color, as has been well documented by a number of research studies, and by the recent experience with hurricanes Katrina and Sandy.

Since impacts from climate change intensify existing vulnerabilities, we take into account the sources of pollution in these communities that continuously place a strain on residents. For Richmond and Wilmington, refineries and the transport of fossil fuel are an everyday threat to health of residents. Climate change can increase this risk, especially when a population is more vulnerable due to ongoing pollution and lack of services. Not only do these emissions impact health, greenhouse gases and volatile organic compounds can lead to greater impacts from climate change. With input from residents through workshops and advisory board meetings, CBE has created the Roadmap to Resilience to highlight issue areas that need to be addressed and initial steps. We highlight 4 main issue areas:



**SEA-LEVEL RISE | EXTREME HEAT EVENTS | HEALTHCARE SERVICES | RENEWABLE ENERGY**

*This Executive Summary provides a preview of all the information our Roadmap to Resilience offers.*

# WILMINGTON NEIGHBORHOOD COUNCIL

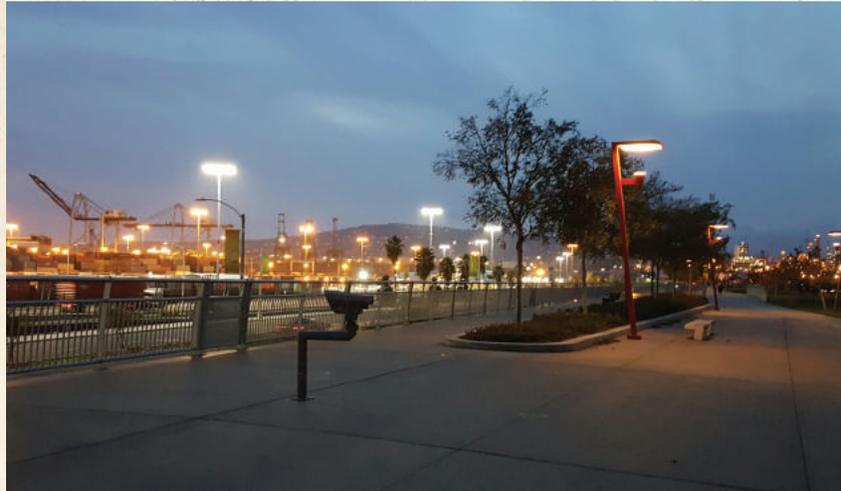
The seats for these Representatives must be at least 16 years of age. Representatives serve 2 year terms at a time. There are currently no term limits.

## At-Large Seats

The Wilmington Neighborhood Council has 3 at-large seats. At-large seats are voted on by everyone because these seats are to represent everyone in Wilmington.

## Appointed Seats

The appointed seats represent different community interests including business/industry, schools, youth community members, and more.



## The Stakeholder Caucus

The Stakeholder Caucus\* appoints most of the representatives on the available appointed seats. The Wilmington Neighborhood Council definition for a stakeholder is quite broad. A stakeholder can be defined by the following:

- Lives in Wilmington
- Works in Wilmington
- Owns real property in Wilmington
- Substantial and ongoing participation within the Wilmington Neighborhood Council's boundaries
- Community organizations within the Wilmington Neighborhood Council's boundaries
  - Community organizations include but not limited to:
    - Educational
    - Non-profit
    - Religious

Stakeholders can participate in the "Stakeholder" Caucus and vote for the representative to appoint to the available position.

On September 28<sup>th</sup>, 2016 there was a Wilmington Neighborhood Council Town Hall for new board members for the following categories:

- Live (3 positions)
- Work (3 positions)
- Own Property (3 positions)
- Community Interest (1 position)

The Wilmington Neighborhood Council is going through an update and its current structure may change. Make sure to follow updates from the Wilmington Neighborhood Council for future updates.

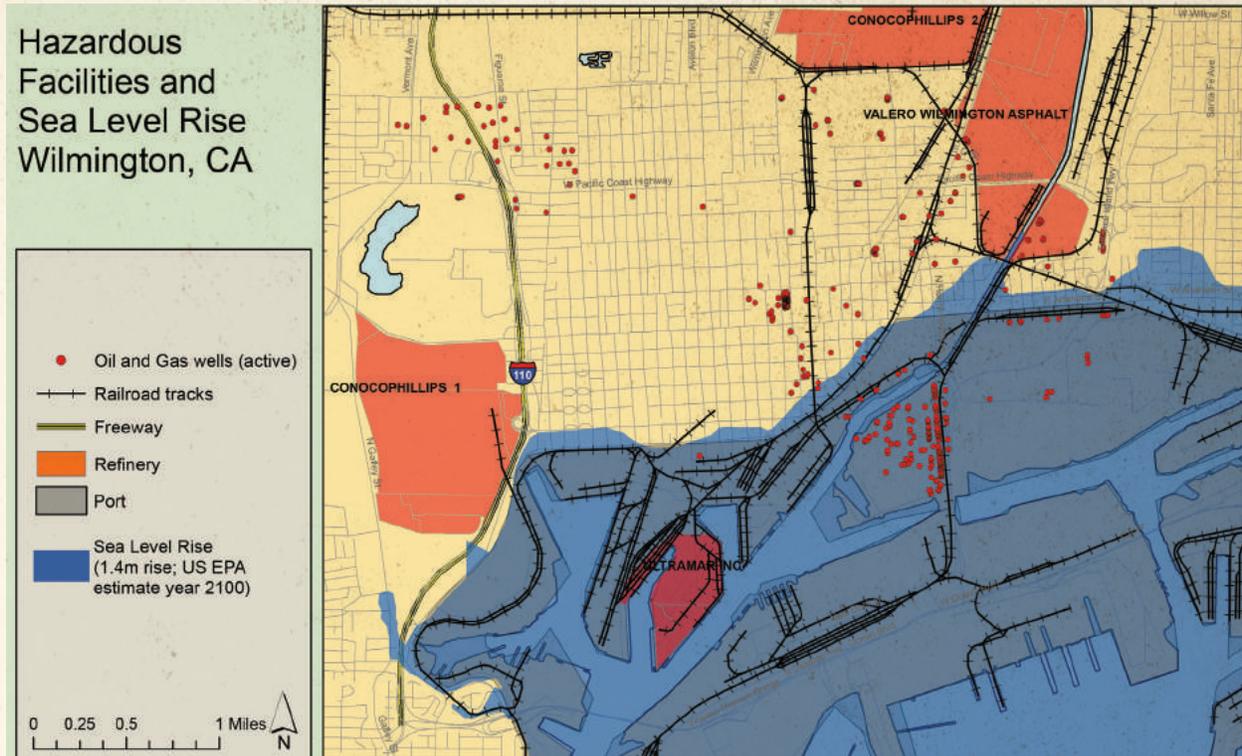
## Requirements for voting in Wilmington Neighborhood Council elections:

- You need to show proof of residence in Wilmington, such as a utility bill
- You need to be at least 16 years of age
- You need some form of visual identification

Visit the WNC website: <http://wilmingtonneighborhoodcouncil.com/>

# SEA-LEVEL RISE

The potential flooding on the sites of hazardous materials could lead to releases that would harm the natural habitat and groundwater.



This map displays sea-level rise and the sites of all drilling, refineries, and petrochemical sites.

## IMPACT ON PUBLIC SYSTEMS

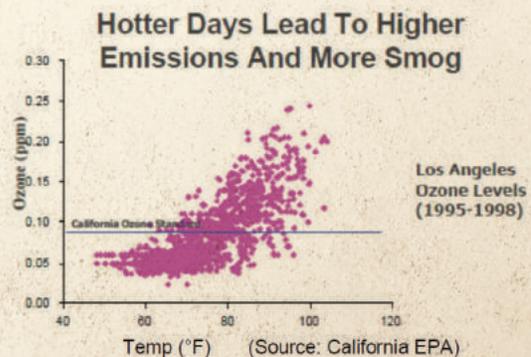
During a flood event, our public systems can be impacted through impairment of drainage of wastewater and storm water, interruption of access to potable water and electricity, and road flooding leading to impaired access to food, water, medications, and emergency services.<sup>1</sup> Already the flooding of low lying roads is a serious problem during storms in Wilmington.<sup>2</sup>

MOST VULNERABLE:	LESS VULNERABLE:
<ul style="list-style-type: none"> <li>• Waste water management</li> <li>• Potable water management</li> <li>• Roads</li> </ul>	<ul style="list-style-type: none"> <li>• Port facilities</li> <li>• Power facilities</li> </ul>

# EXTREME HEAT EVENTS

## Climate Change hurts public health due to higher temperatures causing smog increases

The link between higher temperature and air pollution is long established. Pollutants emitted on hot days (Volatile Organic Compounds and Nitrogen Oxides) chemically react in the atmosphere to form harmful ground level ozone, plus a mix of other pollutants including particulate matter, that make up smog. The following graphic illustrates increasing ground-level ozone (in parts per million or ppm) with increased temperatures in 1995-1998 in the Los Angeles example, causing violations of California's ozone health standard. The California Air Resources Board provides similar graphics for Riverside and Fresno for later years.<sup>3</sup>



## Staying Cool at Home

- Using Air Conditioning or evaporate “swamp” coolers
- Going to cooling shelters or public pools
- Stay hydrated
- Installing indoor thermometers
- Taking cool showers and foot baths
- Resting when hot
- Unsticking painted windows
- Drinking electrolytes (esp. for children)
- Using fans properly (i.e. not in unventilated rooms over 95 F)
- Shading windows
- Planting shade trees like Fern Pine or Sweet Bay
- Insulating one’s home
- Using reflective “cool” paints



Note: More information on this cooling center site in the full Roadmap to Resilience

## HEALTHCARE SERVICES

Apart from making healthcare services more accessible, there is also a need for an alert system that can inform resident during emergencies. A pilot of a reverse 911 could be established for Wilmington and then be extended to other neighborhoods throughout LA. Given the higher possibility of industrial and natural disasters, Wilmington is an environmental justice community that would greatly benefit from the establishment of this type of program. Still, the rollout of the pilot should result from significant community engagement and should include the languages used Wilmington.

## RENEWABLE ENERGY

Climate change can increase vulnerabilities of the electrical grid due to increased temperature, wildfires, floods, winds and extreme weather.<sup>4</sup> For example, power outage can occur due to high temperatures decreasing power plant efficiency, transmission line sagging, higher energy use during hot days from air conditioning, wildfires, and other climate-related grid vulnerabilities. In general, local, lower voltage electricity distribution lines have been the cause of most existing power outages (for example due to tree limbs falling during storms) even without climate change. But climate change can increase overall grid vulnerability, especially with a large sprawling grid.

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### ENDNOTES

1 • Grifman, P. M., J. F. Hart, J. Ladwig, A. G. Newton Mann, M. Schulhof. (2013) Sea Level Rise Vulnerability Study for the City of Los Angeles. USCSG-TR-05-2013.

2 • CBE Youth EJ Meeting, 7/29/14

3 • Graphics from California EPA, as excerpted from American Lung Association, Fact Sheet, Air Quality and Health Impacts of Greenhouse Gas Emissions and Global Warming, available at: [http://www.dnrec.delaware.gov/dwhs/Info/Regs/Documents/alac\\_impacts\\_fs.pdf](http://www.dnrec.delaware.gov/dwhs/Info/Regs/Documents/alac_impacts_fs.pdf); The California Air Resources Board also provides graphics for later years (2003-2006) for Riverside and Fresno, Slide 15, Climate Change Impacts on California Scenario Assessment Findings of the Climate Action Team, November 2008, available at: <https://www.arb.ca.gov/board/books/2008/112008/08-10-1pres.pdf>

4 • For example, see Union of Concerned Scientists, Power Failure: How Climate Change Puts Our Electricity at Risk (2014), [http://www.ucsusa.org/global\\_warming/science\\_and\\_impacts/impacts/effects-of-climate-change-risks-on-our-electricity-system.html#.WA69UegrK00](http://www.ucsusa.org/global_warming/science_and_impacts/impacts/effects-of-climate-change-risks-on-our-electricity-system.html#.WA69UegrK00)